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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

RUTHKOSKY, MARK

ART UNIT

PAPER NUMBER

1745

MAIL DATE

DELIVERY MODE

10/03/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/823,919	Applicant(s) MIYAHISA ET AL.	
	Examiner Mark Ruthkosky	Art Unit 1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) ____ is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Response to Amendment

This paper follows a response to a restriction/election filed 6/14/2007.

Election/Restrictions

Applicant's election with traverse of Species I in the reply filed on 7/12/2007 is acknowledged. The traversal is on the ground(s) that an examination of all claims would not present a "serious burden" on the Examiner and that the Examiner has not stated substantive reasons for the distinctiveness of the species.

This is not found persuasive because the examination of both species of claims does place a serious burden on the examiner. Examiner has not stated substantive reasons for the distinctiveness of the species. As noted in the restriction, both groups are to a battery comprising electrode plates manufactured by a claimed method. In each method the step of removing active material is different. In claim 13, the step includes removing the active material from a volume of said active material impregnated core substrate defined by said rail shaped protrusion and extending from said first surface at said rail shaped protrusion to an opposing second surface of said active material impregnated core substrate to form said rail shaped protrusion into a core substrate exposed section by applying ultrasonic vibrations to said rail shaped protrusion so as to result in 4% or less residual active material by weight in said volume of said core substrate exposed section. Claim 3 does not require this method step. In claim 13, the compressing step includes compressing said core substrate exposed section to result in a strength of said core

Art Unit: 1745

substrate exposed section, after said removing of said active material and said compressing, being substantially equal to a strength of said pressed portions. Claim 3 does not require such a method step. From this, it is clear that both methods are distinct.

In addition, the dependent claims of each group are different and impose a burden on the examiner to examine different species of the claims. Applicant argues that the language of claim 3 plus claim 11 recites the language of claim 13. This would be improper, as applicant cannot have two claims to the same invention in an application. Otherwise, it appears that the steps of claim 11 are indefinite as it is not clear how the steps of claim 11 relate to claim 3 and that claim 11 adds addition steps to claim 3.

Further, applicant has not met the burden of showing that the species are not patentably distinct. Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 3-12 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure that is not enabling. The step of cutting the substrate along the exposed portion critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). The invention includes making electrodes on a substrate, removing active material to give exposed portions, and cutting the exposed portions to give individual electrodes.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The rejection under 35 U.S.C. 112 based on the term “hoop” in claim 2, has been overcome by applicant’s amendment canceling the claim.

New Rejections

Claims 3-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term “pressed portions” in the 2nd last paragraph of claim 1 is indefinite as both the exposed portions and the active material impregnated portions are pressed.

The limitation “to produce substantially true straight boundaries between said core substrate exposed section and said pressed portions wherein said substantially true straight boundaries exhibit a deviation from straight of no more than 0.2 mm” is indefinite as it is not

Art Unit: 1745

clear what determines a deviation when the boundary is the exposed section adjacent to the impregnated section.

In claim 4, the boundaries are claimed to have a radius. Since the edge is claimed to be straight, it is not clear what constitutes a radius.

In claim 6, the pressed portions are pressed to approximately half a thickness. The thickness that is used to determine half a thickness is not defined and is unclear.

In claim 10 the phrase "impregnation density variation" is indefinite because it is not clear what defines the variation. Since there are exposed portions, the variation is almost 100%.

Claim Rejections - 35 USC § 102/103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that

Art Unit: 1745

the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-12 are rejected under 35 U.S.C. 102(b) as being anticipated by, OR in the alternative being unpatentable over Shigemoto et al. (JP 10-247,493). The reference was cited by applicant in the parent application US 10/111,665.

The instant claims are to a battery comprising an electrode group formed from battery electrode plates of a positive electrode and a negative electrode spirally wound with a separator interposed there between; a battery case for housing said electrode group; and at least one of the battery electrode plates being manufactured by a method comprising impregnating an entire porous core substrate, which forms the at least one battery electrode plate and is thin plate shaped, with an active material; press working a first surface of said active material impregnated core substrate to form a rail shaped protrusion protruding above pressed portions and defining boundaries with said pressed portions; removing the active material from said rail shaped protrusion to form said rail shaped protrusion into a core substrate exposed section by applying ultrasonic vibrations to said rail shaped protrusion; compressing said core substrate exposed section down to an identical level with said pressed portions to produce substantially true straight boundaries between said core substrate exposed section and said pressed portions wherein said substantially true straight boundaries exhibit a deviation from straight of no more than 0.2 mm; and welding a collector lead to said core substrate exposed section.

MPEP 2113 states, "Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of

Art Unit: 1745

a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.”

The reference teaches a battery comprising an electrode group formed from battery electrode plates of a positive electrode and a negative electrode laminated alternately with a separator interposed there between (abstract and figures 1-5.) A lead is welded/connected to the electrode. The positive and negative electrodes include these elements. The battery further comprises an electrode group formed from battery electrode plates of a positive electrode and a negative electrode spirally wound with a separator interposed there between; and a battery case for housing said electrode group (figure 6 and the corresponding text.) As the exposed portion has no active material, it would have less than 4% active material. Since the electrode has the same structure across the plate, it would inherently have a substantially equal strength at the exposed portion. Thus, the claims are anticipated.

As the claims include a different method than the prior art, the claims are further rejected under 35 U.S.C. 103(a). The prior art does not teach the same method of making the electrode as claimed, however the claims are to a product. MPEP 2113 states, “Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.”

Response to Arguments

Applicant's arguments filed 4/3/2007 have been fully considered but they are not persuasive. Applicant's arguments with respect to the amended claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Examiner Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Ruthkosky whose telephone number is 571-272-1291. The examiner can normally be reached on FLEX schedule (generally, Monday-Thursday from 9:00-

Art Unit: 1745

6:30.) If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached at 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free.)

Mark Ruthkosky

Primary Patent Examiner

Art Unit 1745

MARK RUTHKOSKY
PRIMARY EXAMINER
[Signature] 9/27/07